FREQUENTLY ASKED QUESTIONS (FAQs)
123Scan^2 Scanner Configuration Utility
19 April 2011

1. **Q. What model scanners are supported by 123Scan^2?**
   A. For an up-to-date list of scanner models supported by 123Scan2, perform a check for updates[1] and then print the "123Scan2 - List of Supported Scanners and Plug-ins" report[2].

   > Note 1 – Plug-ins that enable 123Scan^2 to support new scanners or updated firmware for a scanner are released periodically and can be downloaded through 123Scan^2 by clicking Help / Check for updates.

   > Note 2 – To print the "123Scan2 - List of Supported Scanners and Plug-ins" report click Help / Supported scanners and plug-ins.

   If you require support for a scanner developed by the Custom Products Group, please submit a Custom Products Request (CPR) at http://cpr.mot.com/.

2. **Q. What Operating Systems are supported by 123Scan^2?**
   A. Supported operating systems include: Windows XP SP3 (32 bit) and Windows 7 (32 bit).

3. **Q. How much does 123Scan^2 cost and where can I order it from?**
   A. 123Scan^2 is available at no cost for users of Motorola scanners. It can be downloaded from http://support.symbol.com/support/product/123Scan2.html.

4. **Q. Has the original 123Scan been discontinued?**
   A. With the introduction of 123Scan^2, the original 123Scan introduced in 1999 has been discontinued. All scanners manufactured in 2009 or later are supported by the new 123Scan^2 scanner configuration utility. Motorola scanners that were no longer available for sale (obsolete) as of 2008 and are not supported by the new 123Scan2 can still be programmed using the scanner's Product Reference Guide.

5. **Q. What programming options does 123Scan^2 support?**
   A. 123Scan^2 offers t programming modes:
   - Parameter Programming – Scan sheet of programming barcodes - All scanners
   - Parameter Programming – Electronic download via USB cable   - RSM enabled scanners only
   - Parameter Programming – Electronic download via RS-232 cable - All scanners
   - Firmware Upgrade   – Electronic download via USB cable   - RSM enabled scanners only

   Additional topics of interest:
   - Does my scanner support communication via a USB cable   FAQ 8
   - What is Remote Scanner Management (RSM)   FAQ 28

6. **Q. What reports can be generated by 123Scan^2?**
   A. 123Scan^2 can generate many report types, listed below:
   - Parameter report – A list of all the parameters programmed to a scanner, contained within a configuration file.
   - Activity report – A detailed list of all activities performed on a scanner through the Discovered Scanners tab.
   - Inventory report – Asset tracking information for all scanners detected through the Discovered Scanner tab.
   - Scanner output validation report – Documents bar code data as transmitted from the scanner to a host.
   - List of supported scanners and plug-ins – An up-to-date list of scanners and plug-ins supported by 123scan^2.

7. **Q. Can 123Scan^2 be used to upgrade a scanners firmware?**
   A. Yes, using a standard USB cable and 123Scan^2, a scanner with the RSM 1.0 or newer enabled firmware can have its firmware upgraded.

8. Q. Does my scanner support two-way communication via a USB cable?
A. For scanners shipped from the factory with Remote Scanner Management (RSM) 1.0 enabled firmware or newer, 123Scan2 connected via a USB cable can be used to retrieve asset tracking information, program parameters and upgrade the scanner's firmware. To determine your scanner's RSM level see the "Remote Scanner Management" section within 123Scan[2]'s help.

Three levels of RSM enabled firmware exist with incremental, additive feature sets:

RSM 2.0 - USB firmware upgrade, parameter loading, LED control, auto initiation of a two-way communication link.
RSM 1.0 - USB firmware upgrade, parameter loading.
LEGACY - Parameter programming via bar code scanning only.

To determine if your scanner's firmware is RSM 2.0 enabled:
1. Plug in your scanner using a USB cable.
2. Launch 123Scan2.
3. Click Create new configuration file on the "Start" tab.
4. Click My scanner is connected via USB cable.

If your scanner is RSM 2.0 enabled, 123Scan[2] displays an image of your scanner and plug-in options.

If 123Scan[2] is unable to detect your scanner it lacks RSM 2.0 enabled firmware but may be RSM 1.0 enabled. If your scanner has RSM 1.0 enabled, a barcode must be scanned to establish USB communication with 123Scan[2]. To print this barcode launch 123Scan[2] and from the toolbar click Tools / Frequently used bar codes / Enable USB communication bar code.

If this fails and 123Scan[2] does not display an image of your scanner, you have a legacy scanner.

Additional topic(s) of interest:
- How do I interpret the scanner's different LED blinking sequences and colors   FAQ 26
- Can I just plug my USB scanner into 123Scan[2] and have it work   FAQ 19
- When was RSM 1.0 firmware cut in on my scanner   FAQ 27
- What is Remote Scanner Management   FAQ 28

9. Q. Can 123Scan[2] generate a single 2D barcode for programming a scanner?
A. Yes, 123Scan[2] can reduce the number of bar codes you must scan to program a scanner.
The utility can generate three different types of programming bar codes depending on your scanner.
- a traditional 1D   Supported by all scanners
- concatenated 1D   Supported by RSM 2.0 enabled laser and imaging scanners
- a single scan 2D bar code   Supported by RSM 2.0 enabled imaging scanners

An actual customer reduced the number of bar codes scanned from 202 traditional 1D bar codes generated / copied from a scanner's Product Reference Guide to 131 traditional 1D generated by 123Scan[2]. When scanned with an imaging scanner, the 202 traditional 1D bar codes were reduced to a single 2D bar code.

In another case, a customer reduced the number of bar codes scanned by a laser scanner from 143 traditional 1D bar codes generated / copied from a scanner's Product Reference Guide to 100 traditional 1D bar codes generated by 123Scan[2]. In this example the customer was further able to reduce the number of bar codes to 38 concatenated 1D bar codes using 123Scan[2].

10. Q. Can I use 123Scan[2] to stage multiple scanners simultaneously?
A. Yes, scanners can be programmed simultaneously through the "Discovered Scanners" tab using powered USB hubs. A 7 port hub must have at least a 3 Amp power supply. This functionality can be

accessed from the Actions menu on the start screen by selecting "View USB connected scanners". The number of scanners programmed simultaneously varies by programming mode.

- Upgrading firmware   14 Scanners
- Loading a configuration file   14 Scanners or more depending on USB bus loading

Additional topics of interest:

- [Does my scanner support communication via a USB cable](#)   FAQ 8
- [How do I interpret the scanner's different LED blinking sequences and colors](#)   FAQ 26
- [During the staging process, can I "hot swap" out completed scanners with new ones](#)   FAQ 24
- [Can I just plug my USB scanner into 123Scan^2 and have it work](#)   FAQ 19
- [When was RSM 1.0 firmware cut in on my scanner](#)   FAQ 27

11. Q. How can I download updates to 123Scan^2?
A. Two methods of updating 123Scan^2 exist.

- 123Scan^2 has the ability to initiate a self upgrade from within the utility – launch 123Scan^2 and from the toolbar click Help / Check for updates. This method supports updating the utility and adding support for new scanner models / versions of firmware.
- The latest version of 123Scan^2 can be downloaded from http://support.symbol.com/support/product/123Scan2.html

12. Q. Are ADF rules created in 123Scan^2 portable across product families?
A. Yes, 123Scan^2 has the ability to save individual ADF rules to an ADF library within the utility. An ADF rule(s) can be loaded to any desired product line(s) such as a LS4278 scanner and also a DS9808.

An individual ADF rule or the whole ADF library can be accessed / exported to another PC running 123Scan2 from the toolbar - Tools / Data formatting library.

13. Q. Is it easy to create a configuration file?
A. 123Scan^2 has a patented wizard to streamline the set up process (creation of a configuration file) for first time users. The wizard guides a user through the process of creating a configuration file for your particular scanner and even suggests defaults settings.

14. Q. Can I email a configuration file?
A. Yes, configuration files can be emailed to others PCs running 123Scan^2. The option to email a configuration file exists within the utility.

15. Q. Does 123Scan^2 offer any new ADF functionality?
A. Yes, three new ADF actions have been introduced for scanners with [RSM 2.0 enabled firmware](#) (FAQ 8):

- Move to pattern,
- Find & replace and
- Skip to end.

16. Q. Can 123Scan^2 print directly to Microsoft Word?
A. 123Scan^2 allows a user to print a sheet of programming barcodes and a parameter report directly from the utility or export the contents as a document in a Microsoft Word compatible format (Rich Text file .rtf) enabling the document to be modified including re-branded.

17. Q. Can Inventory and Activity reports be exported to MS Access?
A. Yes, Inventory and Activity reports can be printed directly from the utility or converted to a Microsoft Access compatible format (.CSV).

18. Q. How do I import a configuration file into 123Scan^2?
A. A configuration file attached to an email can be opened within 123Scan^2 by double clicking on the file. To save the configuration file to your PC's hard drive, from the 123Scan^2 toolbar click "Save file to PC".

19. Q. Do I have to scan a barcode before my USB scanner will work with 123Scan^2?
A. scanners with RSM 2.0 enabled firmware or newer, 123Scan^2 automatically detects the scanner upon its USB cable being plugged into your PC and initiates a two-way USB communication link between scanner and utility. This patent pending feature is an industry first.

If your scanner has RSM 1.0 enabled firmware a barcode must be scanned to establish USB communication with 123Scan^2. To print this barcode launch 123Scan^2 and from the toolbar click Tools / Frequently used bar codes / Enable USB communication bar code.

Legacy scanners cannot communicate with 123Scan^2 using a cable. Legacy scanners can be programmed via scanning a sheet of 123Scan^2 generated programming bar codes.

Additional topics of interest:
- Does my scanner support two-way communication via a USB cable
  FAQ 8
- How do I interpret the scanner's different LED blinking sequences and colors
  FAQ 26
- When was RSM 1.0 firmware cut in on my scanner
  FAQ 27
- What is Remote Scanner Management
  FAQ 28

20. Q. Can 123Scan^2 re-load my pre-upgrade settings after loading new firmware?
A. In another industry first, updating firmware no longer involves lost settings that prevent your scanner from communicating with its host — 123Scan^2 preserves and automatically re-loads your pre-upgrade settings upon completion of the firmware upgrade.

21. Q. Does 123Scan^2 provide me access to the latest scanner firmware?
A. Keeping your scanner at peak performance is easy — 123Scan^2 automatically monitor Motorola's website for new utility updates and scanner plug-ins (firmware) every time it is launched. If an upgrade is found, the utility requests permission before downloading.

To manually download new scanner firmware, from the toolbar click Help / Check for updates.

22. Q. What are the key features of 123Scan^2 (100 word product overview)?
A. 123Scan² is a free, easy-to-use, PC-based software tool that enables rapid and easy customized set up of Motorola scanners.

123Scan² uses a wizard tool to guide users through a streamlined set up process. Settings are saved in a configuration file that can be distributed via email, electronically downloaded via a USB or RS-232 cable, or used to generate a sheet of scannable programming bar codes.

Additionally 123Scan² can upgrade scanner firmware, display scanned bar code data, capture images, check online to enable support for newly released products, generate a multi-setting barcode for single scan programming, stage large numbers of scanners simultaneously, generate reports with asset tracking information and create custom products.

23. Q. What is the first step to creating a configuration file?
A. The first step in creating a configuration file is selecting a plug-in after clicking "Create new configuration file" from the 123Scan^2 Start tab. A scanner plug-in tells 123Scan^2 all the particulars of your scanner.

All USB connected Motorola scanners* allows 123Scan^2, without user intervention, to recommend a plug-in. For additional information see FAQ 19, "Do I have to scan a barcode before my USB scanner will work with 123Scan^2".

Alternatively, to manually determine which plug-in is required to support your model scanner, launch 123Scan^2 and click on 'Create new configuration file" and then click "My scanner is NOT connected".

* LS1203 and LS9203 do not support auto-switching / plug-in recommendations.

24. **Q. During the staging process, can I "hot swap" completed scanners with new ones?**
A. In an industry first, 123Scan^2's "Hot Swap Mode" enables a user to disconnect a scanner that has completed the programming process and in its place connect a new scanner. During this time, the utility will continue to program all USB connected scanners. Hot swap mode will repeat the last programmed user action on newly connected scanners such as loading a configuration, upgrading firmware or both actions.

25. **Q. How long does it take to upgrade the firmware of 1 scanner versus 14 scanners?**
A. The duration of the firmware update process can range from 2 minutes* to over half an hour depending on the host PC and the scanner model. Programming multiple scanners simultaneously occurs in parallel. The time required to program multiple scanners is the same as required to program one scanner.

*Imaging scanners (SNAPI communication protocol)

26. **Q. How do I interpret the scanner's different LED blinking sequences and colors?**
A. The scanner's LED sequences and colors controlled by 123Scan^2 are as follows:

Blinking Green	- Scanner connected to 123Scan^2.
Fast Blinking Red	- File being transferred to the scanner.
Slow Blinking Red	- Firmware being activated on the scanner, loaded into memory.
Solid Green	- Programming completed successfully.
Solid Red	- Error state.
LED is Off	- Scanner and 123Scan2 are NOT communicating.

Note LED sequence control requires RSM 2.0 (FAQ 8) or newer enabled scanner firmware.

27. **Q. When was RSM 1.0 firmware cut in on my scanner?**
A. Motorola scanners support the newest innovations in Remote Scanner Management (RSM) technology.

If your scanner has RSM 1.0 enabled firmware a barcode must be scanned to establish two-way USB communication with 123Scan^2. After two-communication with 123Scan^2 has been established, you can electronically program your scanner (download a configuration file to your scanner) and even upgrade its firmware. To print this barcode launch 123Scan^2 and from the toolbar click Tools / Frequently used bar codes / Enable USB communication bar code.

An RSM 1.0 enabled scanner can be upgrade by customers using a USB cable to RSM 2.0 or later using 123Scan^2.

If your scanner shipped from the factory with RSM 2.0 or new firmware or you upgraded your scanners firmware in the field, 123Scan^2 automatically detects the scanner upon its USB cable being plugged into your PC and initiates a two-way USB communication link between scanner and utility. This patent pending feature is an industry first.

See below for a table outlining when the first implementation of RSM 1.0 or later enabled firmware started shipping on your scanner.

Product	RSM Enabled (MM/YYYY)
LS4278	02/2006
LS4208	03//2006
LS3008	03/2006
DS6708	10/2006
DS6707	04/2007
LS3578	08/2007
LS7808	09/2007
LS7708	09/2007
DS3407	12/2007
LS3408	03/2008
LS9208i / 9203i	10/2008
DS3408	01/2009
DS9808	04/2009
LS2208	Target 01/2010
LS4208PR	Target 01/2010

Additional topics of interest:
- Does my scanner support two-way communication via a USB cable   FAQ 8
- Can I just plug my USB scanner into 123Scan[2] and have it work   FAQ 19
- How do I interpret the scanner's different LED blinking sequences and colors   FAQ 26

28. **Q. What is Remote Scanner Management (RSM)?**
A. Motorola scanners support the newest innovations in Remote Scanner Management (RSM) technology. Remote Scanner Management enables the control of Motorola RSM enabled scanners by an application or driver. With a click of a button, an application can access asset-tracking information such as serial number, date of manufacture and firmware version. In addition, Remote Scanner Management enables an application to control the upgrade of firmware and loading of configurations settings.

Three levels of RSM enabled firmware exist with incremental, additive feature sets:

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29. **Q. How do I view scanned bar code data within 123Scan[2]?**
A. With an RSM enabled scanner connected via a USB cable to the utility, click on the Data view tab. Double click on the desired scanner then single click on the "Barcode data view (Scan Log)" hypertext. Upon selecting your desired communication mode (HID Keyboard Emulation, OPOS or SNAPI), the Scan log screen will appear. Simply scan a bar code and the output of the scanner will be displayed on screen.

30. Q. How do I capture an image within 123Scan2?
A. With an image capture capable scanner connected via a USB cable to the utility, click on the Data view tab. Double click on the desired scanner then single click on the "Image Viewer (Image Log)" hypertext. Upon the Image log screen appearing, click "Capture image" to capture an image. Images can be saved to a PC using one of the supported image formats (24-bit Bitmap, GIF, JPEG and PNG).